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Alfred Tom

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EXAMINER

LU, ZHIYU

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/606,178	Applicant(s) TOM, ALFRED	
	Examiner ZHIYU LU	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 43-47, 49-54 and 57-66 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 43-47, 49-54 and 57-66 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 43 and 51 have been considered but are moot in view of the new ground(s) of rejection.

Double Patenting

2. Claim 58 objected to under 37 CFR 1.75 as being a substantial duplicate of claim 57.

When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 65 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

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In claim 65, applicants claim “each of the service array, registration list, and cartridge list comprises a dynamic list of integers” while the filed specification only supports the service array to comprises a dynamic list of integers. (paragraph 0061).

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 62 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 62, applicants use the term “a memory” in both shell and cartridge, which makes the claim language indefinite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 43-58 and 62-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson (US Patent#5465401) in view of Anderson et al. (US2002/0138499), Vilppula et al. (US Patent#6961587) and Johansson et al. (US Patent#5418837).

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Regarding claim 43, Thompson teaches a composite wireless device comprising:

a shell (50 of Fig. 2) having non-wireless hardware components (68, 70 of Fig. 8), memory (284 of Fig. 8), and system software, wherein the system software includes an operating system, software drivers, and one or more software applications (column 3 lines 28-29, 32-36, column 10 lines 23-25), and

a cartridge (100 of Fig. 2) removably coupled to the shell through an interface (106 of Fig. 10) and having wireless hardware components and call-processing software to communicate with the system software (column 14 lines 45-62) and to access a wireless communication service supported by the cartridge upon coupling of the cartridge with the shell, wherein the call-processing software informs the shell which wireless services it supports as well as the shell support requirements of the supported wireless services (list, 60f of Fig. 8, column 15 line 56 to column 16 line 54, obvious as linkage between software application and system software that manages hardware drivers).

But, Thompson does not expressly disclose wherein the shell memory stores a service array including one or more elements, each element representing a wireless service and having a value specifying a level of support by the shell for the respective wireless service, and a registration list including registration information for the one or more software applications, the registration information containing an identifier for each application correlated with a respective identifier of a wireless service requested by the respective software application; and the system software of the shell uses the service array to determine, through a comparison operation performed in one of the shell or the cartridge, whether the shell is able to meet the shell support requirements of the cartridge supported wireless services, and then uses the registration information to determine

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whether any of the wireless services supported by the cartridge are requested by any software application through the registration list.

However, one of ordinary skill in the art would have obviously recognized that each software application must register or identify with the system software before usage. Otherwise, software application cannot be used or relayed with hardware.

Anderson et al. teach in a software management system, memory stores a service array (function/service encoding, a binary bit vector) including one or more elements, each element representing a wireless service and having a value specifying a level of support for the respective service (paragraphs 0042-0043), and a registration list including registration information for the one or more software applications, the registration information containing an identifier for each application correlated with a respective identifier of a wireless service requested by the respective software application (paragraphs 0024-0030, obvious as application identifier assigned with function/service encoding); and the system software uses the service array to determine, through a comparison operation performed in one of the operating environments, whether one is able to meet the support requirements of another supported services, and then uses the registration information to determine whether any of the services supported by the another are requested by any software application through the registration list (paragraphs 0060-0064, identifying data subscription/request in application including function/service affiliations of the requested data through function/service matching/comparing operation on candidate data operation in cross application, which obviously decides data availability and support for applications). Thus, it would have been obvious to one of ordinary skill in the art to recognize that the same application and service exchange operation between the shell and the cartridge of

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Thompson could be modified into the application crossing operation of Anderson et al., in order to the shell to manage native applications to work with importing services from the cartridge.

Vilppula et al. teach a shell comprises the service array containing a correlated list associating an identifier for each software application with respective identifiers of one or more wireless services accessed by each software application, the correlated list generated through a registration process in which each application registers for at least one wireless service (30, 32, 34 and 36 of Fig. 2, column 5 lines 37-50, which obviously decides support and availability), which further shows the obviousness to one of ordinary skill in the art that the shell of Thompson and Anderson et al. could manage application with application identification registration and service array listing by software management preference.

Johansson et al. teaching having call-processing software communicates with operating system software in response to coupling of cartridge with shell (column 2 lines 50-57, column 6 lines 38-42, Fig. 3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate having a service array that contains wireless service related software in shell taught by Vilppula et al. and actuating communication between shell and cartridge upon coupling taught by Johansson et al., into the composite wireless device of Thompson and Anderson et al., in order to enable wireless communication function in the shell itself and provide automatic data communication.

Regarding claim 51, Thompson, Anderson et al., Vilppula et al., and Joansson et al. teach a method as explained in response to claim 43 above.

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Regarding claim 51, Thompson, Anderson et al., Vilppula et al., and Joansson et al. teach a modular communication device as explained in response to claim 43 above.

Regarding claims 44 and 52, Thompson, Anderson et al., Vilppula et al., and Joansson et al. teach the limitations of claims 43 and 51.

Thompson teaches wherein the non-wireless hardware components are selected from the group consisting of keypad, graphic display element, battery, speaker, and microphone (Fig. 8).

Regarding claims 45 and 52, Thompson, Anderson et al., Vilppula et al., and Joansson et al. teach the limitations of claims 44 and 51.

Thompson teaches wherein the wireless hardware components are selected from the group consisting of baseband circuit, radio frequency component, and antenna (Fig. 8).

Regarding claims 46 and 53, Thompson, Anderson et al., Vilppula et al., and Johansson et al. teach the limitations of claims 43 and 52.

Thompson, Anderson et al., Vilppula et al., and Johansson et al. teach wherein each application registers for at least one wireless service through a registration process that comprises: assigning the application a client identification number (application identifier); storing the client identification number in a service request list (menu, 60f of Fig. 8 of Thompson); and

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communicating with the application through a function return call (obvious in relaying menu selection and selected application).

Regarding claims 47 and 54, Thompson, Anderson et al., Vilppula et al., and Johansson et al. teach the limitations of claims 46 and 53.

Thompson, Anderson et al., Vilppula et al., and Johansson et al. teach wherein the shell includes a sub-routine to determine if a selected application software is operable with the supported wireless communication service by receiving the wireless service identifier from the application software regarding which wireless communication service is to be used based on the registration, and to compare the wireless service identifier with an identifier provided by the call-processing software, and further to notify the application software that an identified wireless service is available (e.g. version identifier, column 4 lines 7-23, column 16 lines 5-35 of Thompson; column 5 lines 37-64 of Vilppula et al.; column 6 line 65 to column 7 line 6 of Johansson et al.).

Regarding claim 49, Thompson, Anderson et al., Vilppula et al., and Johansson et al. teach the limitation of claim 43.

Thompson, Anderson et al., Vilppula et al., and Johansson et al. teach wherein each element of the service array comprises an integer value, and wherein the value determines a level of support for a wireless service by the hardware and software resources of the shell and further wherein the position of the value in the list reflects a specific wireless service (paragraphs 0042-0043 of Anderson et al.).

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Regarding claims 50 and 57-58, Thompson, Anderson et al., Vilppula et al., and Johansson et al. teach the limitations of claims 49 and 51.

Thompson, Anderson et al., Vilppula et al., and Johansson et al. teach wherein the cartridge maintains a list of supported wireless services, the cartridge list comprising one or more elements, each element representing a supported wireless service and having a value specifying a level of support required by the respective wireless service from the shell, and wherein the shell sends the service array to the cartridge and the cartridge uses this service array compared against the cartridge list to determine which wireless services the composite wireless device is able to support (paragraphs 0024-0030, 0064 of Anderson et al., as an obvious utility in support exchange between shell and cartridge of Thompson, Vilppula et al., and Johansson et al.).

Regarding claim 63, Thompson, Anderson et al., Vilppula et al., and Johansson et al. teach the limitation of claim 62.

Thompson, Anderson et al., Vilppula et al., and Johansson et al. teach wherein, upon coupling of the cartridge and the shell, the shell sends the service array to the cartridge and the operating system compares the service array against the cartridge list to determine which wireless services the modular communication device is able to support (as explained in response to claim 43 above).

Regarding claim 64, Thompson, Anderson et al., Vilppula et al., and Johansson et al. teach the limitation of claim 62.

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Thompson, Anderson et al., Vilppula et al., and Johansson et al. teach wherein the shell operating system maintains a default service array specifying which wireless serves the shell is able to support given a current hardware configuration, and wherein, upon coupling of said cartridge with the shell, the shell transmits the default service array to the cartridge, and the call-processing software sends another service array back to the shell informing the shell which wireless services will be supported by the current hardware configuration (as explained in response to claim 43 above).

Regarding claim 65, Thompson, Anderson et al., Vilppula et al., and Johansson et al. teach the limitation of claim 62.

Thompson, Anderson et al., Vilppula et al., and Johansson et al. teach wherein each of the service array, registration list, and cartridge list comprises a dynamic list of integers, each integer having a value specifying a level of support required by the respective wireless service from the shell (paragraphs 0042-0043 of Anderson et al.).

6. Claims 59-61 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson (US Patent#5465401) in view of Anderson et al. (US2002/0138499), Vilppula et al. (US Patent#6961587), Johansson et al. (US Patent#5418837), and Aberg (US Patent#6993362). Regarding claims 59-61 and 66, Thompson, Anderson et al., Vilppula et al., and Johansson et al. teach the limitations of claims 43, 58 and 65.

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But, Thompson, Anderson et al., Vilppula et al., and Johansson et al. do not expressly disclose wherein the shell further expands the registration information to include the new wireless service in the event that the system software does not recognize the wireless service, which is same as method of further comprising: modifying the service array to include supported wireless services as a result of the comparison operation to generate a final service array; and sending the final service array to the shell to indicate the wireless services supported by the shell.

Aberg et al. teach expanding registration list to incorporate information concerning additional wireless communication services (column 5 lines 51-61), which would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate into the device and method of Thompson, Anderson et al., Vilppula et al., and Johansson et al., in order to include additional wireless service as a result of service converging between shell and cartridge.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ZHIYU LU whose telephone number is (571)272-2837. The examiner can normally be reached on Weekdays: 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc Nguyen can be reached on (571) 272-7503. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Zhiyu Lu
Examiner
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May 19, 2009

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